

**REMARKS****Rejections**

Claims 1-3, 5-7, 9-12, 14-16, 18-20, 22, 23, 25-27 and 29 stand rejected under §112, second paragraph. The Examiner cites the phrase “rapid rate of change” as being a relative term which renders the claim indefinite.

Further the Examiner pointed out that the present claims have been amended and that whereas the earlier claims had overcome a similar rejection, the claims as pending were subject to this rejection as referring to the results of the rapid rate of change rather than standards for defining same. See Action, page 10 at the top.

Further all pending claims stand rejected under 35 U.S.C. §102 as anticipated by Hogan or obvious in light of Hogan and Newman or Hogan and Tanaka.

**New Claims**

All independent claims previously pending are canceled in favor of new claims. New Claim 30 replaces canceled Claim 1. New Claim 31 replaces canceled Claim 11. New Claim 32 replaces canceled Claim 23. All these new claims are directed to similar subject matter and in most respects are similar to the corresponding previously pending independent claims, except that they no longer refer to “control data”. Additionally, the present claims revert to the previous language with respect to the nature of the rapid rate of change and thereby overcome the §112 rejection. The amendments to the dependent claims are to conform same to the new base independent claims rather than for purposes of patentability and are not intended to narrow these dependent claims.

**§112 Rejection Overcome**

New Claim 30 recites with regard to the “rapid rate of change” “the data patterns have a DSV (digital sum value) which has a rapid rate of change over time wherein the transitions in the EFM (eight to fourteen modulation) signal from the data patterns are shifted from their ideal values

or the ability of disc drives to maintain optimal head positioning is comprised;”. Thereby it is respectfully submitted that, per the Examiner’s comments, this overcomes the §112 rejection in clearly defining the nature of the rapid rate of change and is similar to the language of the claims as pending before the most recent prior amendment. Therefore it is respectfully submitted that the §112 rejection should be reconsidered and withdrawn since each of the other independent claims currently submitted is in this respect essentially identical to Claim 30.

Claims Not Anticipated Or Obvious In Light Of Hogan

The Examiner also rejected the claims as being anticipated by Hogan in the case of the independent claims or obvious in light thereof with regard to certain dependent claims. It is respectfully submitted there is a significant difference between the invention as disclosed in the present specification and Hogan in terms of the technical problems overcome and the resulting solutions. In accordance with the present invention as explained in the specification at paragraph 6:

The present invention utilises the inherent limitations of currently available CD writers. Thus, the applicants have found that it is possible to provide an authenticating signature on a disc which, because of its size and/or its nature, cannot be accurately written onto a disc by a writer for recordable discs such that it is reliably readable. However, the much more sophisticated encoders used in mastering houses, for example, the encoder which controls a laser beam recorder, can be controlled to accurately write the authenticating signature to the glass master.

Hence in accordance with the present invention the data on the disc can be written by a conventional laser beam recorder but the resulting disc cannot be copied in terms of its content by a currently available CD writer of the type commercially available. This has the advantage of using presently available laser beam recorders and their widely available encoders for purposes of copy protection. Hence the present inventor recognized the relevant technical distinction between conventional CD writers and conventional laser beam recorders, both of which are now on the market. The invention therefore exploits this distinction in terms of the data patterns by using the

rapid rate of change which can be encoded by the laser beam recorder encoders but cannot be properly handled by the CD writers.

Hogan, the primary reference cited by the Examiner, addresses a different technical problem. While Hogan is also directed to copy protection of CDs or other optical discs, he instead exploits the difference between standard encoders of the type commercially available and a special unique encoder of his own design. See Hogan Summary of the Invention at column 3, beginning line 43:

There are three embodiments. The first two embodiments exploit the fact that some sequences of symbols will likely be encoded by “standard” encoders into a sequence of channel bits that leads to a large accumulated DSV, and likely cannot be reliably detected by most read channels.

In a first embodiment, a special encoder encodes an original sequence of symbols into a sequence of channel bits that can be read by all decoders. Standard encoders will likely encode the same original sequence of symbols into a different sequence of channel bits that will lead to a large accumulated DSV. (Emphasis added)

Therefore Hogan devised his new or novel so-called special encoder shown in his FIGS. 3C and 3D as compared to the prior art standard encoder of FIGS. 3A and 3B. The Hogan encoders are shown in terms of functionality rather than a block diagram but it is understood that the special encoder is one capable of producing the data patterns of FIGS. 3C and 3D. The reference to the “special encoder” is repeated throughout the Hogan disclosure, see also column 4, line 2, column 4, lines 27-30, column 5, line 1, column 5, line 65 et al.

The Hogan special encoder is defined at column 6, beginning line 26:

The key difference between the standard encoder of FIGS. 3A and 3B and the special encoder of FIG. 3C and 3D is that the special encoder makes an apparently less optimal choice for the first three symbols...

There is no indication that this Hogan “special encoder” is of a type commercially available in terms of laser beam recorders or any other presently available equipment. It is

apparently a “special” design conforming to Hogan FIGS. 3C and 3D. Moreover, the single claim of Hogan at column 10 specifically recites in step c “encoding the sequence of symbols with a special encoder...”. Hence even the Hogan claim emphasizes the requirement for the special encoder.

Clearly no such “special encoder” is required in accordance with the present invention which instead is capable of being carried out using a standard laser beam recorder type encoder, as pointed out above.

Hence, new Claim 30 (the substitute for canceled Claim 1) recites in its final clause “wherein the data patterns are of the type provided by an encoder of a conventional laser beam recorder.” This reads on, for instance, the present application paragraphs 6 and 7. While the literal term “conventional” does not appear in these exact words here in the specification, it is respectfully submitted that this is clearly descriptive of the subject matter in, for instance, paragraphs 6 and 7 with reference to the nature of the laser beam recorder. Hence the term “conventional” is well supported by the specification.

Of course no such feature is present in Hogan which addresses the different technical problem of making the data inaccessible in effect to standard encoders (of whatever type) by instead substituting the special encoder both disclosed and claimed in Hogan and which is unique to him. Hence the above final clause of Claim 30 clearly distinguishes over Hogan. The other references cited by the Examiner in rejecting certain of the dependent claims also fail to make good this deficiency of Hogan. Hence Claim 30 clearly distinguishes over Hogan, as do the claims dependent thereon.

New Claims 31 and 32, which substitute for the canceled other earlier pending independent claims, recite the same subject matter with regard to the rapid rate of change and the nature of the encoder in their final clauses similar to Claim 30 and hence are allowable over Hogan for at least the same reasons as pertain to Claim 30.

Hence all pending Claims 2, 3, 5-7, 9-10, 12, 14-16, 18, 19, 25-27, and 29-32 are allowable and allowance thereof is requested. If the Examiner contemplates other action, he is requested to contact the undersigned at the telephone number given below.

**CONCLUSION**

Therefore it is respectfully submitted that all pending claims in this case are allowable and allowance thereof is requested. This Amendment is filed under Rule 34. The correspondence address remains that of Macrovision Corporation.

In the event that the U.S. Patent and Trademark Office determines that an extension of time and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or fees due in connection with the filing of this paper to the undersigned's Deposit Account No. 03-1952 referencing docket no. 136922003800.

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Respectfully submitted,

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